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| Table S9. Primer list used in deep-sequencing | | | | |
| **Primer name** | **Target gene** | **Product length (bp)** | **Forward primer (5'→3')** | **Reverse primer (5'→3')** | |
| Seq-13a-I | Genes of Pro13a-I subgroup | 398 | TCGTATTTGCTCTCCTTGCT | GATACCACATATGGATGGCAA | |
| Seq-13b-I/II | Genes of Pro13b-I/II subgroups | 433 | TCGTCTTTGCTCTCCTTGCT | ACACCGCCAAGGGTGGTAA | |
| Seq-13a.1 | *Pro13a.1* | 920 | TTTTCTTGCTACCCATCATG | AGTAAAATTGTAAAGTCCCT | |
| Seq-13a.2 | *Pro13a.2* | 849 | TGTATATATGATGGGCATAA | GATAATGCAACCTCATACAT | |
| Seq-13a.3 | *Pro13a.3* | 1241 | TGCACATTCAGCTTAGAAAT | TTGAATAGTGGATTTATAAC | |
| Seq-13a.4 | *Pro13a.4* | 1243 | AAAACAATAGCTTACAATAC | GTATCCATAATCTCCACACA | |
| Seq-13b.1 | *Pro13b.1* | 1432 | AAATCAATTTTCTAGTAGTG | AATAGCTTAGTAAACGTGA | |
| Seq-13b.2 | *Pro13b.2* | 1432 | TTTTTCAAGAATGATGGACA | AATAGCTTAGTAAACGTGA | |
| Seq-13b.3 | *Pro13b.3* | 1636 | ACTACCCGGTGCACTATAGT | GGGAATAAAAGAATTTAGTC | |
| Seq-13b.8 | *Pro13b.8* | 1646 | CCCGTTGGGTTAATTCCGGT | TGAATTACCTATGTCTAGGT | |
| Seq-13b.13 | *Pro13b.13* | 854 | CTCACTTAGATCCTAATAGG | AAGTATCTTCGGATCGAATG | |
| Seq-13b.A | *Pro13b.5, 6, 7, 9, 10, 11, 12* | 479 | CAGCAAAATAGAAAGATCTA | ACACCGCCAAGGGTGGTAAT | |
| Seq-13b.B | *Pro13b.14, 15, 16* | 398 | GCCTCTGCACAGTTTCATGT | ACACCGCCAAGGGTGGTAAT | |
| Seq-13b.C | *Pro13b.17, 18, 19* | 1239 | ATCATTTTCGTCTTTGCTCT | ACCATCACGTACACTTTACC | |
| Seq-13b.20 | *Pro13b.20* | 1590 | CTTTTACCTCAATCTCACGT | ATGACGTGGAATCACCAGGA | |
| Seq-13b.21 | *Pro13b.21* | 1620 | TAGTGTGGAAGATGTGTACA | ACCATCACGTACACTTTCCG | |
| Seq-13b.22 | *Pro13b.22* | 1298 | TGCACGTGCATGATTACTAG | GCATCTATAAATAGACAATG | |
| Deep-Seq13a | Genes of Pro13a-I subgroup | 217 | **ACACTCTTTCCCTACACGACGCTCTTCCGATCT**TCAGCCCATGCAGTGAGTTC | **GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT**TGGTAGTGAGATTGTTGCGCT | |
| Deep-Seq13b | Genes of Pro13b-I/II subgroups | 216 | **ACACTCTTTCCCTACACGACGCTCTTCCGATCT**CTGCTACAGCAACAGGTGCT | **GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT**GTGAGATTGTTGCGCCACCA | |
| PCR-Cas9 | *SpCas9* | 1839 | GGCAGGATAGACTCTTTGCTGA | TAAGAACCTGCCCAACGAGA | |
| PCR-HygR | *HygR* | 615 | GTCTCCGACCTGATGCAGCT | TTGGGAATCCCCGAACATCG | |
| Bold sequence is linkers for deep sequencing | | | | |